

CLAIMS

We claim:

1. A tool for lacerating or grasping other objects, the tool comprising:

an outer shaft with an open end and a closed end and an opening located parallel to a longitudinal axis extending from the open end to near the closed end;

an actuator bar with a tip end and an actuation end and a consistent width, a transition near the tip end resulting in the tip end having a longitudinal offset axis displaced from the longitudinal axis in a single plane, the actuation end engaging a translation means for translation of the actuator bar relative to the outer shaft, a radial ridge located near the tip end for engagement with an inner tip; and

the inner tip rotationally engaged to the outer shaft near the closed end and the inner tip having a connected end, the inner tip interengaging the radial ridge with a curved slot located on an open side where translation of the actuator bar relative to the outer shaft results in rotation of the inner tip relative to the outer shaft.

2. The tool of claim 1, wherein:

the translation means is a hand grip.

3. The tool of claim 1, further comprising:

the outer shaft having a die edge near the closed end and the

inner tip having a biting edge, the die edge and biting edge for
interacting with objects locatable between the biting edge and the
die edge.

4. The tool of claim 1, wherein:

the transition occurs over a shift distance not exceeding two
times the width of the actuator bar.

5. The tool of claim 1, wherein:

the offset axis is displaced from the longitudinal axis a distance
of 20% - 75% of the width of the actuator bar.

6. The tool of claim 1, further comprising:

the radial ridge having an upper surface smaller in area than a
lower surface and the curved slot having a first surface smaller
in area than a lower surface.

7. The tool of claim 1, further comprising:

the transition is located in the actuator bar within a transition
location of four times the width of the actuator bar from a
center.

8. A tool for interacting with objects, the tool comprising:

an outer shaft with an open end and a closed end and a trough-like
opening located parallel to a longitudinal axis extending from the

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open end to near the closed end, a shaft hole and an axle hole located perpendicular to the longitudinal axis through the outer shaft;

5 an actuator bar with a tip end and an actuation end with a slot located therebetween and a consistent width, a transition near the tip end resulting in the tip end having a longitudinal offset axis displaced from the longitudinal axis in a single plane, the actuation end engaging a translation means for translation of the
10 actuator bar relative to the outer shaft, a radial ridge located near the tip end for engagement with an inner tip; and

the inner tip rotatably attached to the outer shaft near the closed end by a tip axle through the axle hole, the inner tip having a connected end, the inner tip interengaging the radial
5 ridge with a curved slot located on an open side such that translation of the actuator bar relative to the outer shaft results in rotation of the inner tip relative to the outer shaft.

20 9. the tool of claim 8, wherein:

the offset axis is displaced from the longitudinal axis a distance of 20% - 75% of the width of the actuator bar.

25 10. The tool of claim 8, wherein:

the transition occurs over a shift distance not exceeding two times the width of the actuator bar.

30 11. The tool of claim 8, further comprising:

the transition is located in the actuator bar within a transition location of four times the width of the actuator bar from a center.

5 12. The tool of claim 8, further comprising:

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the radial ridge having an upper surface smaller in area than a lower surface and the curved slot having a first surface smaller in area than a lower surface.

10 13. The tool of claim 8, wherein:

the translation means is a hand grip.

5 14. The tool of claim 8, further comprising:

the outer shaft having a die edge near the closed end and the inner tip having a biting edge, the die edge and biting edge for interacting with objects locatable between the biting edge and the die edge.

15. A tool for interacting with objects, the tool comprising:

an outer shaft with an open end, a closed end and a trough-like opening located parallel to a longitudinal axis extending from the open end to near the closed end, a shaft hole and an axle hole located perpendicular to the longitudinal axis through the outer shaft, a die edge circumscribing a tip opening near the closed end for interacting with an inner tip;

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an actuator bar with a tip end and an actuation end having a slot perpendicular to a longitudinal axis there between, the actuator bar having a consistent width, a transition near the tip end resulting in the tip end having a longitudinal offset axis displaced from the longitudinal axis in a single plane, the actuation end engaging a translation means for translation of the actuator bar relative to the outer shaft in a direction parallel to the longitudinal axis, a radial ridge located near the tip end for engagement with the inner tip; and

the inner tip rotatably attached to the outer shaft near the closed end by a tip axle through the axle hole, the inner tip locatable within a tip opening in a closed position, the inner tip having a connected end opposite a biting end, the inner tip interengaging the radial ridge with a curved slot located on an open side such that translation of the actuator bar relative to the outer shaft results in rotation of the inner tip relative to the outer shaft.

16. The tool of claim 15, further comprising:

the radial ridge having an upper surface smaller in area than a lower surface and the curved slot having a first surface smaller in area than a lower surface.

17. the tool of claim 15, wherein:

the offset axis is displaced from the longitudinal axis a distance of 20% - 75% of the width of the actuator bar.

18. The tool of claim 15, wherein:

the transition occurs over a shift distance not exceeding two times the width of the actuator bar.

19. The tool of claim 15, further comprising:

the transition is located in the actuator bar within a transition location of four times the width of the actuator bar from a center.

20. The tool of claim 15, wherein:

the translation means is a hand grip.

21. The tool of claim 15, further comprising:

the outer shaft having a die edge near the closed end and the inner tip having a biting edge, the die edge and biting edge for interacting with objects locatable between the biting edge and the die edge.